

**Amendment and Response**  
Applicant: Paul F. Reboa et al.  
Serial No.: 10/731,070  
Filed: December 9, 2003  
Docket No.: 200210084-1  
Title: LIGHT MODULATOR

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### **REMARKS**

The following Remarks are made in response to the Non-Final Office Action mailed May 26, 2004, in which claims 1-7, 12-22, 27-35, 38-46, 50, and 51 were rejected, and claims 8-11, 23-26, 36, 37, and 47-49 were objected to. With this amendment, claims 5, 6, 20, 21, 33, 34, 44, and 45 have been cancelled without prejudice, claims 52-61 have been added, and claims 1-4, 8, 12, 13, 16-19, 23, 27-32, 36, 38-43, 47, 50, and 51 have been amended, including allowable claims 8, 23, 36, and 47 which have been rewritten in independent form. Claims 1-4, 7-19, 22-32, 35-43, and 46-61, therefore, remain pending in the application and are presented for reconsideration and allowance.

### **Claim Rejections under 35 U.S.C. § 102**

Claims 1-7, 12-22, 27-35, 38-46, 50, and 51 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakata U.S. Patent No. 4,729,640.

With this Amendment, independent claim 1 has been amended to clarify that the light modulator includes a plurality of electrodes formed on the substrate adjacent the cavity, and that the transparent plate has an uneven surface including a plurality of recessed areas, wherein the interface of the liquid is provided along the uneven surface within the recessed areas, and wherein each of the electrodes is associated with one of the recessed areas of the uneven surface. In addition, independent claim 16 has been amended to clarify that the method of forming a light modulator includes forming a transparent plate with an uneven surface including a plurality of recessed areas, and forming a plurality of electrodes on the substrate adjacent the cavity, including associating each of the electrodes with one of the recessed areas of the uneven surface, wherein the interface of the liquid is provided along the uneven surface of the transparent plate within the recessed areas. In addition, independent claim 29 has been amended to clarify that the light modulator includes a plurality of electrodes formed on the substrate adjacent the cavity, and that means for orienting the interface of the liquid includes an uneven surface of the transparent plate, the uneven surface including a plurality of recessed areas and the interface of the liquid being provided along the uneven surface within the recessed areas, wherein each of the electrodes is associated with one of the recessed areas of the uneven surface. In addition, independent claim 40 has been amended to clarify that the method of controlling light includes directing the light toward an

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uneven surface of the transparent plate including a plurality of recessed areas, wherein each of the electrodes is associated with one of the recessed areas of the uneven surface, and wherein the interface of the liquid is provided along the uneven surface of the transparent plate within the recessed areas.

With respect to the Sakata patent, this patent does not teach or suggest a light modulator as claimed in amended independent claim 1, a method of forming a light modulator as claimed in amended independent claim 16, a light modulator as claimed in amended independent claim 29, nor a method of controlling light as claimed in amended independent claim 40.

In view of the above, Applicant submits that independent claims 1, 16, 29, and 40 are each patentably distinct from the Sakata patent and, therefore, are in a condition for allowance. Furthermore, as dependent claims 2-4, 7, and 12-15 further define patentably distinct claim 1, dependent claims 17-19, 22, 27, and 28 further define patentably distinct claim 16, dependent claims 30-32, 35, 38, and 39 further define patentably distinct claim 29, and dependent claims 41-43, 46, 50, and 51 further define patentably distinct claim 40, Applicant submits that dependent claims 2-4, 7, and 12-15, dependent claims 17-19, 22, 27, and 28, dependent claims 30-32, 35, 38, and 39, and dependent claims 41-43, 46, 50, and 51 are also in a condition for allowance. Applicant, therefore, respectfully requests that the rejection of claims 1-7, 12-22, 27-35, 38-46, 50, and 51 under 35 U.S.C. 102(b) be reconsidered and withdrawn and that claims 1-4, 7, 12-19, 22, 27-32, 35, 38-43, 46, 50, and 51 be allowed.

#### **Allowable Subject Matter**

Claims 8-11, 23-26, 36, 37, and 47-49 are objected to as being dependent upon a rejected base claim and are indicated as being allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims.

With this Amendment, Applicant has rewritten allowable claim 8 in independent form to include all of the limitations of the base claim (claim 1) and any intervening claims (none). In addition, Applicant has added new claims 52-55 to depend from rewritten independent claim 8. As rewritten claim 8 is now believed to be in allowable form, Applicant respectfully submits that dependent claims 9-11 and 52-55 are allowable in dependent form. Applicant,

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therefore, respectfully requests that the objection to claims 8-11 be withdrawn and that claims 8-11 and 52-55 be allowed.

With this Amendment, Applicant has rewritten allowable claim 23 in independent form to include all of the limitations of the base claim (claim 16) and any intervening claims (none). In addition, Applicant has added new claims 56-57 to depend from rewritten independent claim 23. As rewritten claim 23 is now believed to be in allowable form, Applicant respectfully submits that dependent claims 24-26 and 56-57 are allowable in dependent form. Applicant, therefore, respectfully requests that the objection to claims 23-26 be withdrawn and that claims 23-26 and 56-57 be allowed.

With this Amendment, Applicant has rewritten allowable claim 36 in independent form to include all of the limitations of the base claim (claim 29) and any intervening claims (none). In addition, Applicant has added new claims 58-59 to depend from rewritten independent claim 36. As rewritten claim 36 is now believed to be in allowable form, Applicant respectfully submits that dependent claims 37 and 58-59 are allowable in dependent form. Applicant, therefore, respectfully requests that the objection to claims 36-37 be withdrawn and that claims 36-37 and 58-59 be allowed.

With this Amendment, Applicant has rewritten allowable claim 47 in independent form to include all of the limitations of the base claim (claim 40) and any intervening claims (none). In addition, Applicant has added new claims 60-61 to depend from rewritten independent claim 47. As rewritten claim 47 is now believed to be in allowable form, Applicant respectfully submits that dependent claims 48-49 and 60-61 are allowable in dependent form. Applicant, therefore, respectfully requests that the objection to claims 47-49 be withdrawn and that claims 47-49 and 60-61 be allowed.

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### CONCLUSION

In view of the above, Applicant respectfully submits that pending claims 1-4, 7-19, 22-32, 35-43, and 46-61 are all in a condition for allowance and requests reconsideration of the application and allowance of all pending claims.

Any inquiry regarding this Amendment and Response should be directed to either Timothy F. Myers at Telephone No. (541) 715-4197, Facsimile No. (541) 715-8581 or Scott A. Lund at Telephone No. (612) 573-2006, Facsimile No. (612) 573-2005. In addition, all correspondence should continue to be directed to the following address:

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Respectfully submitted,

Paul F. Reboa et al.,

By their attorneys,

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**CERTIFICATE UNDER 37 C.F.R. 1.8:** The undersigned hereby certifies that this paper or papers, as described herein, are being facsimile transmitted to the United States Patent and Trademark Office, Fax No. (703) 872-9306 on this 25<sup>TH</sup> day of August, 2004.

By   
Name: Scott A. Lund